

Amendments to the Claims

The following list of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (original) A method of modulating differentiation of oligodendrocytes comprising reducing exposure of oligodendrocytes and precursors thereof to osteopontin.
2. (original) The method of claim 1, wherein said reducing is obtained by exposing said oligodendrocytes and precursors thereof to an antibody that specifically binds osteopontin.
3. (original) The method of claim 1, wherein said reducing is obtained by inactivating osteopontin receptor.
4. (original) The method of claim 3, wherein said receptor is exposed to an osteopontin antagonist.
5. (original) The method of claim 3, wherein said receptor is exposed to an antibody that binds to said receptor.
6. (original) A method of modulating differentiation of oligodendrocytes comprising modulating the activity of a receptor for osteopontin on oligodendrocytes or precursors thereof.

7. (currently amended) A method of modulating differentiation of oligodendrocytes,
according to Claim 1, further inducing remyelination at a site requiring remyelination
comprising ~~reducing~~ increasing exposure of oligodendrocyte and precursor cells thereof
at said ~~a remyelination~~ site to osteopontin to enhance oligodendrocyte precursor number
at said site, and then ~~increasing~~ reducing exposure, according to Claim 1, of said
oligodendrocyte precursor cells to osteopontin to thereby enhance- enhancing
differentiation into oligodendrocytes, wherein said oligodendrocytes enhance
remyelination at said remyelination site.
8. (original) The method of claim 7, wherein said reducing is obtained by using an antibody
that specifically binds osteopontin.
9. (original) The method of claim 7, wherein said reducing is obtained by inactivating
osteopontin receptor.
10. (original) The method of claim 7, further comprising exposing cells remote from said site
to osteopontin, wherein osteopontin is a chemoattractant and causes migration of
responsive cells to said site.
11. (original) The method of claim 10, wherein said osteopontin is secreted by astrocytes.
12. (original) The method of claim 10, wherein said osteopontin is expressed by cells exposed
to an osteopontin agonist.
13. (original) The method of claim 10, wherein said osteopontin is expressed by cells exposed
to an antibody that binds to osteopontin receptor.
14. (original) A method of obtaining a molecule that induces migration of cells to a site
requiring myelination comprising:

exposing cells expressing an osteopontin receptor to candidate molecules;
identifying those candidate molecules that bind to said receptor;
exposing oligodendrocyte precursor cells to said identified candidate
molecules; and
identifying those candidate molecules that induce migration of said precursor
cells.

15. (original) The method of claim 14, wherein said molecule that induces migration is an
osteopontin agonist or inverse agonist.

16. (original) A method of obtaining a molecule that induces dedifferentiation of an
oligodendrocyte or prevents differentiation of an oligodendrocyte precursor cell
comprising:

exposing cells expressing an osteopontin receptor to candidate molecules;
identifying those candidate molecules that bind to said receptor;
exposing oligodendrocyte precursor cells to said identified candidate
molecules; and
identifying those candidate molecules that prevent differentiation of said
precursor cells into mature oligodendrocytes.

17. (original) A method of obtaining a molecule that induces dedifferentiation of an
oligodendrocyte or prevents differentiation of an oligodendrocyte precursor cell
comprising:

exposing cells expressing an osteopontin receptor to candidate molecules;
identifying those candidate molecules that bind to said receptor;

exposing oligodendrocytes to said identified candidate molecules; and
identifying those candidate molecules that induce dedifferentiation of said
oligodendrocytes.